Households' Geographic Access to Center-based Early Care and Education: Estimates and Methodology from the National Survey of Early Care and Education

National Survey of **Early Care** & **Education**

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Overview

This document offers a national picture of selected segments of the early care and education (ECE) market by describing how important attributes of the supply of and the demand for center-based care relate to each other. The document also provides a methodological guide for using newly available data from the National Survey of Early Care and Education (NSECE) to study local-level interactions of the supply of and demand for center-based early care and education (ECE) in the United States.

The NSECE design, through its provider cluster, is unique among data sources in connecting providers and households via their geographic proximity. Because of this feature, the NSECE data allows us to describe ECE markets as geographies where transactions between providers and households are most likely occurring. While previous research based on other data sources has used counties or states, researchers can now utilize the NSECE data to offer richer and more precise descriptions of ECE markets.

Our general approach is to aggregate provider characteristics to define supply-side attributes of local areas (clusters). We then link these cluster-level aggregate characteristics to households using their shared geography.

For this brief we selected some center-based care variables characterizing the services provided to families, such as whether or not the care is full-time, whether or not parents pay for care, and whether or not infants and toddlers are served. Because of their policy relevance, we also included center-based variables that identify whether centers receive Head Start, Pre-K and/or child care subsidy (CCS) funding so that we can characterize families' geographic accessibility to centers receiving public funding.

Households are characterized by income-to-poverty ratio, age of children, presence of non-parent adult, use of center-based ECE, and race/ethnicity, as well as community poverty density and urbanicity. For each subgroup of households, we calculate the average proportion of nearby centers having selected characteristics. Both household income and community poverty density are associated with multiple center attributes, but different center attributes exhibit different associations. We find that Hispanic families differ from white non-Hispanic families in their geographic access to several types of centers. Finally, geographic access to Head Start-funded programs is related to household income and community poverty density, although geographic access does not vary in these ways for either Public Pre-K or CCDF funding sources to centers.

The report notes a few limitations of this approach, for example, the substantial variation across clusters in the numbers of centers per cluster, and the square mileage covered by each cluster. We conclude with several suggestions for extensions to this approach, including incorporating a wider variety of center characteristics or home-based providers.

Introduction: Purpose and Research

This document offers a national picture of selected segments of the early care and education (ECE) market by describing how important attributes of the supply of and the demand for center-based care relate to each other. The document also provides a methodological guide for using newly available data from the National Survey of Early Care and Education (NSECE) to study local-level interactions of the supply of and demand for center-based early care and education (ECE) in the United States. In so doing, the document also lays out lessons learned by the NSECE research team from combining the NSECE Household and Center-based Provider data files to study how attributes of center-based ECE choice sets vary for households with different demographic characteristics. This first look then sets the stage for more in-depth analyses about why these disparities might be observed and what impact they may have on children and their families.

The NSECE design, through its provider cluster, is unique among data sources in connecting providers and households via their geographic proximity. Because of this feature, the NSECE data allows us to describe ECE markets as geographies where transactions between providers and households are most likely occurring. While previous research based on other data sources have used counties or states, researchers can now utilize the NSECE data to offer richer and more precise descriptions of ECE markets.

NSECE SAMPLE DESIGN

The NSECE sample design geographically links households with young children to nearby center-based ECE providers. The survey first sampled counties (or groups of counties) and then identified census tracts (or groups of census tracts) as secondary sampling units (SSU). Households were drawn from within those SSUs. Provider clusters, from which center-based providers were sampled, were formed by joining all census tracts overlapping with a circle of radius two miles centered at the population centroid of each SSU.

The NSECE uses the concept of a *provider cluster* to generate nationally representative estimates while capturing the very local nature of how families seek and use ECE, how providers seek and serve children, and how they together affect the context in which ECE utilization occurs. The map below depicts a hypothetical cluster in Dallas, Texas. The central yellow area represents the cluster's anchor tract (i.e., SSU), while the gray shaded areas depict scatter tracts comprising the remainder of the cluster.

Households in the (yellow) anchor tracts were sampled for inclusion in the Household Survey and the Home-based Provider Survey. Center-based and home-based providers were drawn from state and federal lists of ECE providers from throughout the yellow and gray (scatter tract) portions of the cluster, approximating the locations from which the centrally-located households might seek ECE services. Nationally, 755 clusters were sampled, although not all clusters have completed interviews in each NSECE data file.

Exhibit 1. NSECE Provider Cluster
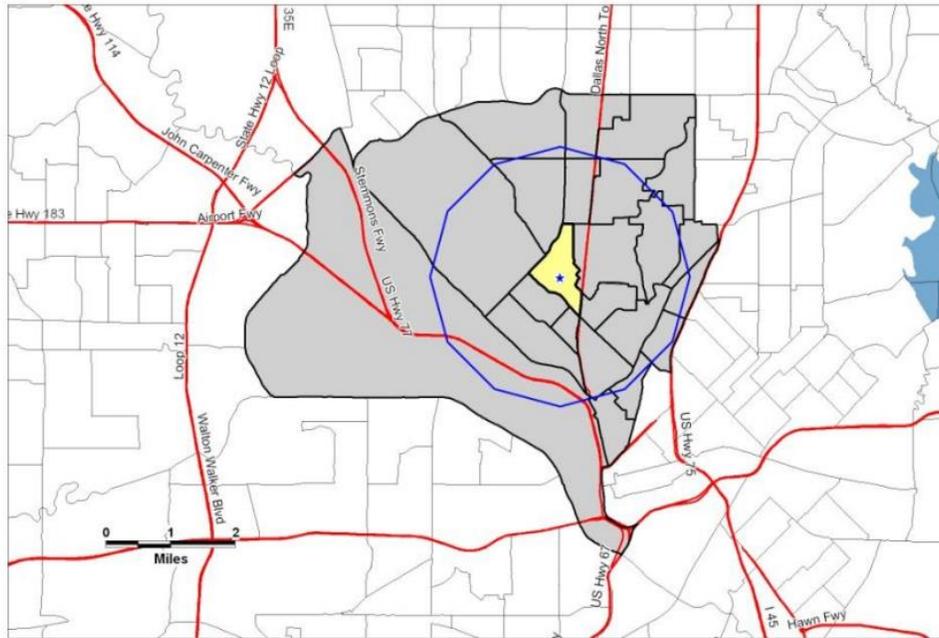
The design was based on the assumption that households have a set of ECE options from geographically proximate child care providers, and that the availability of providers in a choice set would influence a household's choice of providers (even if ultimately the household selects a provider from outside of that choice set). In other words, provider clusters were designed to portray a set of providers potentially available to households in their provider clusters (which we call the provider choice set).[1] Under this assumption, summary characteristics of the provider cluster portray the attributes of the supply for child care that are geographically available to households.[2]

An attractive feature of our provider cluster definition is that clusters expand and contract with the population density and geographic features of a location. As a result, while clusters in some densely populated areas may be quite compact, clusters in sparsely populated areas may involve distances tens of miles from the anchor tract to the cluster boundaries.

The analysis approach takes into account not only the supply-side characteristics of the cluster (i.e., the attributes of centers in each provider cluster), but also the number of children exposed to those characteristics because they are in that cluster's SSU. This combination of supply-side characteristics with the nationally representative household sample (and its associated sampling weights) allows us to generate nationally representative estimates of households' access to different types of center-based ECE.

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[1] For more information on the NSECE sample design, please refer to: National Survey of Early Care and Education Project Team (2013). *National Survey of Early Care and Education: Summary Data Collection and Sampling Methodology.* OPRE Report #2013-46, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
[2] Clusters vary in square mileage based on the population density of the area. In addition, provider clusters can overlap with one another, but the SSUs anchoring the clusters are mutually exclusive.

Data

FORMING AN ANALYTIC DATABASE

In this section we describe a general approach to constructing analytical databases using NSECE data to conduct supply and demand-like analyses. Firstly, we describe how to aggregate provider-level characteristics to define supply-side attributes of local areas. Secondly, we explain how to use the geography to join those aggregated provider attributes with household data.

Step 1: Aggregating Center-based Attributes at the Provider Cluster Level

In this study, we connect center-based provider attributes to household characteristics by constructing cluster-level measures of the supply of center-based care—one observation for each of the provider clusters where there was at least one center-based provider to children five years old or younger but not yet in kindergarten. As Exhibit 2 shows, the NSECE provider clusters have a median number of nine center-based providers; the number of providers per cluster ranges from zero to more than 50. (Of the 755 NSECE clusters, 718 have at least one center-based provider interview.)

Exhibit 2. Number of Center-based Providers per Cluster
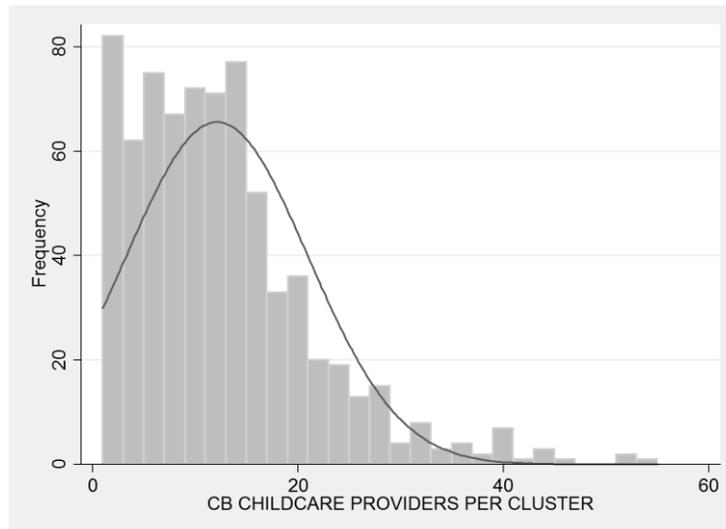
Note: The analytical database is formed using all provider clusters in which there is at least one center serving children five or younger. N clusters in NSECE=755; N in analytical database = 718 clusters; Median=9 center-based providers per cluster.

The characteristics of centers in each provider cluster are computed by aggregating each provider's data across all providers within the provider cluster. A cluster-level weight is available for this purpose.[3] These "center-based cluster aggregates" indicate attributes of the supply of center-based ECE that is geographically available to each household in its 'choice set.'

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[3] Additional information on cluster-level and county-level sampling weights is available in *NSECE PSU and Cluster Weights Users' Guide* (NSECE, 2016).

Exhibit 3 illustrates how we created the center-based cluster aggregates. The oval on the left depicts geographical locations of sampled center-based providers. In the center oval, each small circle represents a provider cluster drawn around an SSU and indicates what providers are associated with each cluster. In the right oval, each circle joining center-based providers in a cluster contains a "bell-shaped" curve to indicate that the relevant center-based attributes were aggregated in a single descriptive statistic (in our case, means). Each provider cluster aggregate is a descriptive statistic that characterizes the attributes of center-based providers geographically located in that cluster.

Exhibit 3. Creating Center-based Cluster Aggregates
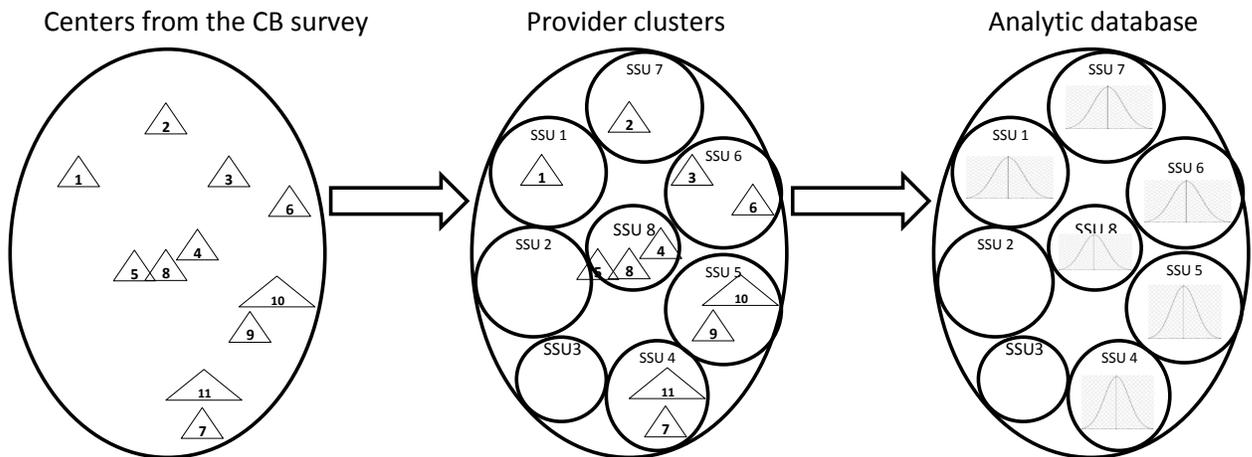
Step 2: Linking HHs to their SSUs/Provider Clusters

Each sampled NSECE household belongs to one and only one SSU. Similarly, each SSU has one and only one associated provider cluster (although it may overlap with other clusters). Using these SSU-cluster correspondences, researchers can merge the already created center-based cluster aggregates with their associated households.

Exhibit 4. Linking HHs to their SSUs/Provider Clusters
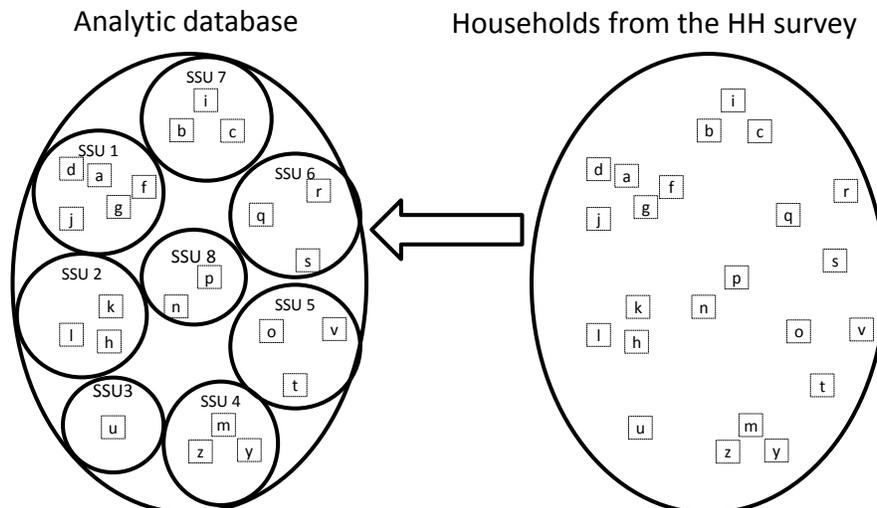
Step 3: Forming the Analytic Database

Exhibit 5 illustrates the final step in constructing the analytic database to study the association between household characteristics and the attributes of center-based programs in those households' choice sets or provider clusters. As in Exhibits 3 and 4, the ovals to the left and right depict geographical locations of center-based providers and households respectively. We form the analytic database by linking center-based cluster aggregates to households through their shared provider clusters. Note that any given provider may be located in the provider clusters of more than one SSU, and that multiple households may be located in a given SSU. However, any given household is located in only one SSU. Once merged to the households through the SSU, the cluster aggregates become attributes of those households. One important implication of this "merging" strategy is that all households in an SSU have the same value of any cluster aggregate.

Exhibit 5. The Analytic Database
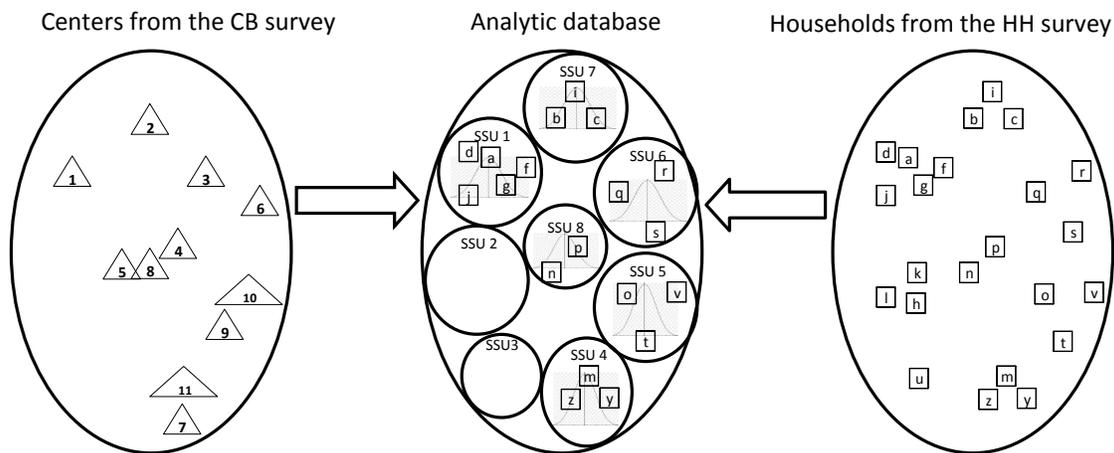
The analytic database includes all households with 1) one or two parents and at least one child under age five[4], and 2) data for at least one center-based provider within their provider cluster.

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[4] We analyze households with children under five because some five year olds are in kindergarten and so would not be in the target population for center-based ECE for young children. In the Center-based Provider data, we are able to distinguish centers that serve children five and under not yet in kindergarten from centers that only serve five year olds through school-age programs for kindergarteners (or those in higher grades).

Research Questions and Variables

As stated in the introduction, one of the goals of this report is to explore how geographic access to selected types of center-based care varies across different subgroups of households.

Household variables have been chosen for this analysis according to two basic criteria: 1) the variable is thought to be a determinant (or predictor) of the demand for center-based care, and; 2) we deem the variable to have a sample size large enough to estimate cross-sectional associations with center-based characteristics. Center-based provider level variables were selected for the analysis that: 1) encompass important components of the supply side of ECE, 2) show substantial variability in their cross sectional association with the described demand side variables, and 3) can be represented as binary variables at the center level. Using binary variables for individual centers then generates cluster aggregates that are proportions of centers. This choice of measures simplifies the interpretation of the cluster aggregate measure and its cross-tabulation with household characteristics. The mathematics of interpreting cluster aggregates based on continuous center-level variables (such as price of child care or enrollment) or using statistics other than the mean are yet to be developed.

By studying the statistical associations between households and their nearby center-based ECE offerings, we can investigate some specific research questions, such as:

- How does the geographic access that US households have to center-based care funded by Pre-K, Head Start and/or childcare subsidy vary with (and therefore potentially respond to) household income, race and ethnicity, and/or community poverty density?
- Is there variation by race/ethnicity in the probability that a household finds a center that receives Head Start funding in their community?

These are two examples, but each of the household population characteristics could be combined with a center-based care statistic to frame additional analyses.

HOUSEHOLD SURVEY VARIABLES

We restrict our household sample to households that have at least one child younger than 5 years old and are either one- or two-parent households -- the subgroups of children whose geographic access we are most interested in exploring -- and classify them by household income to poverty ratio and race/ethnicity. We have also selected variables at the household and community level that, consistent with the literature on childcare choices, help to explain those choices. The set of *variables* and their implicit categories from the Household survey are described in Exhibit 6.

Exhibit 6. Household Survey Variables

Variable	Description
1. HH's income to poverty ratio in categories (2011): <100% poverty; 100% to <200% poverty; 200% to <300% poverty; >=300% poverty	These variables are constructed as the total household income for calendar year 2011 divided by the poverty threshold for a household of given size with a given number of related children.
2. Community poverty density in categories: Low, moderate and high	Poverty density is determined by the percentage of the total population with income below poverty. The weighted percentage of households (HH) in the provider cluster that are below the Federal Poverty Level (FPL) was used to categorize the local community: 1) High Poverty (>20% of HH below FPL), 2) Moderate-Poverty (13.9-20% of HH below FPL), & 3) Low-Poverty (0-13.8% of HH below FPL). Data come from the American Community Survey.
3. Urbanicity in categories: High density urban; Moderate density urban; Rural	NSECE households are classified across the urban-rural spectrum if their provider clusters have: 1)High density of urban population (values of 1.00 to .85 in ratio of urban to total population), 2) Moderate density urban population (values of .30 to .84 in ratio of urban to total population), 3) Rural population (values of .29 or less in ratio of urban to total population). Data come from the American Community Survey.
4. Race and Ethnicity: White (non-Hispanic); Black (non-Hispanic); Hispanic; Other (non–Hispanic)	Combines child's Hispanic or Latino origin with child's race(s). A child was classified as Hispanic/Latino if (i) his/her ethnicity was reported as Hispanic/Latino, regardless of race information; or (ii) if the household respondent volunteered Hispanic/Latino in response to the question on race.
5. Presence of at least one child less than 36 months old	Identifies if there is at least one child less than 36 months old in the household.
6. Presence of at least one non-parent adult in the HH	Identifies if there is at least one adult in the household who is not the parent of a child under age 13 in the household.
7. Whether the HH uses center-based care for at least one child (0-5)	Center-based ECE includes care such as Head Start, pre-school, day care centers, public pre-K, or other regular center-based arrangements.

CENTER-BASED PROVIDER VARIABLES USED FOR CLUSTER AGGREGATES

As explained before, we constructed a set of *cluster aggregates* that summarize the center-based ECE located in the provider cluster and are thought to be important for describing differential geographical access across subgroups of households.

For this brief we selected some center-based care variables characterizing the services provided to families. Because of their policy relevance, we also included center-based variables that identify whether centers receive Head Start, Pre-K and/or child care subsidy (CCS) funding so that we can characterize families' geographic accessibility to centers receiving public funding. The center-based variables that were aggregated and analyzed are listed below[5].

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[5] More information about these center-based provider variables is available in the NSECE reports National Survey of Early Care and Education Project Team (2014) *Characteristics of Center-based Providers of Early Care and Education,* and National Survey of Early Care and Education Project Team (2016) *Which Early Care and Education Centers Participate in Head Start and Public Pre-Kindergarten?*

1. Center charges families for at least one age group
2. Center serves children full time (at least 30 hours weekly)
3. Center provides care for children under three years old
4. Center has at least one child whose enrollment is funded with Child Care Subsidy dollars
5. Center has at least one child whose enrollment is funded with Head Start dollars
6. Center has at least one child whose enrollment is funded with state or local Public Pre-K dollars

In each case, we construct a proportion of centers within the provider cluster having the specified characteristic. For simplicity of exposition in this report, we describe centers in a household's provider cluster as being 'nearby' to the household. In sparsely populated areas, the mileage distance between households and their 'nearby' providers can be tens of miles.

Results

In this section we present the results of the analysis of the dataset resulting from combining NSECE Center-based Provider and Household variables. To generate national estimates, we apply household sampling weights to the cluster-level aggregate measures of center-based ECE that are now household attributes. These data describe the proportion of centers near a household with a certain characteristic. The centers are geographically accessible to the households, but may not be accessible in other ways, such as cost, schedule, or availability of slots.

We use contingency tables and regression methods to study the associations between subgroups of households and their nearby center-based ECE. Contingency tables (displayed in Exhibits 7-12) show descriptive statistics of aggregated attributes at the cluster level describing the supply of center-based care. Those aggregated measures are cross tabulated by attributes of households geographically located in the SSUs that are associated with those provider clusters.

Statistical Significance Testing

In order to enrich and validate the information provided by the contingency tables, we conducted statistical significance testing of the mean differences across the dimensions of each variable. Appendix I describes the t-tests and F-tests we performed to evaluate the individual and joint significance of each one of the categories underlying each household variable in their associations with center-based provider attributes.

Each of the center-based cluster aggregates described in the section "Research Questions and Variables" is described with reference to its cross-tabulation with household characteristics. For ease of presentation, we translate the proportions in the tables into percentages in the discussion below.

CENTER-BASED PROVIDERS THAT CHARGE TUITION AND/OR FEES TO PARENTS

Exhibit 7 shows bivariate relationships between households with selected characteristics and the percentage of their nearby center-based providers that charge tuition and/or fees to parents. (Centers that do not charge tuition or fees to parents might include Head Start programs, public school-based public pre-K programs, or other preschools that are fully subsidized by sources other than parent fees.)

The first panel in Exhibit 7, on household income to poverty ratio, suggests that income is associated with the geographic availability of center-based providers that charge tuition and/or fees to households.

Our results indicate that, on average, 66 percent of centers located near households characterized as low income (<100%, Federal Poverty Line, FPL) charge families for care, but 80 percent of centers located near the highest income households (>=300% FPL) charge families. The difference between the lowest and highest income is statistically significant (details on significance testing are provided in Appendix I). A pairwise significance test across categories (details not shown in appendix) indicates that the difference that is not statistically significant is between the two middle income brackets (100 to <200% vs. 200 to <300%).

The second panel in Exhibit 7 looks at community poverty density instead of household income. Again, higher incomes are associated with higher percentages of centers charging families for care. On average, 79 percent of centers located near households living in low-density poverty areas charge families for care. In areas with moderate-density poverty, on average, 65 percent of providers near households with young children charge families for care. Similarly, on average, 62 percent of centers near households located in high-poverty density areas charge for care. Low-poverty density areas are statistically significantly different from moderate or high-density areas, but the latter two are not significantly different from one another. (Pairwise testing results not shown in appendix.)

The third panel in Exhibit 7 suggests that, on average, 73 percent of centers located near households in high-density urban areas charge families for care. In contrast, 63 percent of providers, on average, near households in moderately urban areas charge for care. Similarly, 64 percent of providers -- on average -- near households in rural areas, charge for care. High- and moderate-density urban areas are statistically different from one another.

The panel on race and ethnicity in Exhibit 7 indicates that approximately 74 percent of providers on average, near White (non-Hispanic) households charge families for child care. This average measure is not statistically different from households identified as Black non-Hispanic (74%) or other race (73%). However, there is a statistically significant difference between White households and Hispanic households (64%).

On average, 72 percent of centers near households charge for care whether or not those households have a child under age 3. Households where all adults are parents to young children in the household (for example, a nuclear family), live near higher concentrations of centers that charge for care than do households that include an adult who is not the parent of a child under 13 in the household. We do not discuss these variables for Exhibits 8 through 12.

The last panel in Exhibit 7 relates the percentage of centers in the cluster that charge families for care to families that use center-based care for at least one child under five. On average, 70

percent of centers located near households who use center-based care charge families for care, while among centers near households who do not use center-based care, 75 percent charge families for care. The difference between the two groups is statistically significant.

Exhibit 7. Average Proportion of Centers in Households' Provider Clusters that Charge Families for Care

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.655	0.015
100% to <200% poverty	0.698	0.020
200% to <300% poverty	0.715	0.022
>=300% poverty	0.798	0.017
Community poverty density in categories		
Low	0.787	0.019
Moderate	0.654	0.023
High	0.620	0.024
Urbanicity in categories		
High density urban	0.728	0.015
Moderate density urban	0.635	0.044
Rural	0.642	0.055
Race and Ethnicity		
White (non-Hispanic)	0.742	0.020
Black (non-Hispanic)	0.738	0.018
Hispanic	0.640	0.019
Other (non-Hispanic)	0.725	0.020
Presence of at least one child less than 36 months old		
At least one	0.725	0.016
None	0.716	0.015
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.735	0.015
Only adult(s) in the HHs is(are) the parent(s)	0.684	0.016
Use of center-based care for at least one child (0-5)		
For at least one child	0.703	0.016
Do not use this type of care	0.750	0.015

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

CENTER-BASED PROVIDERS SERVING CHILDREN AT LEAST 30 HOURS WEEKLY

Exhibit 8 (and in its corresponding appendix Table A2) shows associations between households' characteristics and the proportion of center-based providers near them that care for children full time (at least 30 hours weekly). On average, 76 percent of centers geographically

near low-income households (i.e., <100% FPL) provide full time care, as do 76 percent of centers near the highest income families (>= 300% FPL). Although this difference is not statistically significant, differences are significant between poor families and families in the two middle income brackets: 73 percent for those 100 to <200% of FPL and 71 percent for those 200 to <300% of FPL.

Exhibit 8. Average Proportion of Centers in Households' Provider Clusters that Care for Children at Least 30 Hours Weekly

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.761	0.012
100% to <200% poverty	0.729	0.018
200% to <300% poverty	0.708	0.024
>=300% poverty	0.759	0.015
Community poverty density in categories		
Low	0.741	0.018
Moderate	0.713	0.030
High	0.797	0.019
Urbanicity in categories		
High density urban	0.757	0.013
Moderate density urban	0.683	0.057
Rural	0.569	0.092
Race and Ethnicity		
White (non-Hispanic)	0.722	0.017
Black (non-Hispanic)	0.827	0.018
Hispanic	0.769	0.018
Other (non-Hispanic)	0.740	0.017
Presence of at least one child less than 36 months old		
At least one	0.758	0.014
None	0.742	0.014
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.741	0.014
Only adult(s) in the HHs is(are) the parent(s)	0.760	0.016
Use of center-based care for at least one child (0-5)		
For at least one child	0.741	0.015
Do not use this type of care	0.760	0.012

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

The second panel in Exhibit 8 indicates that on average, for households in low poverty density areas, 74 percent of nearby centers provide full time services. This estimate does not statistically differ for households located in neighborhoods with moderate (71%) poverty density.

However, the measure does differ for households in low poverty density (74%) relative to high poverty density (80%).

This income-driven pattern is coupled with a noticeable difference across urbanicity. The third panel in Exhibit 8 indicates that the proportion of centers offering full time services, on average, is 76 percent for households in urban areas. This is not statistically different for households located in areas with moderate urban density (68%); however, it is statistically different for households located in rural areas (57%).

The panel on race and ethnicity indicates that black non-Hispanic households (83%) have on average significantly higher percentages of centers offering full time care in their communities relative to white non-Hispanic households (72%). Likewise, Hispanic households have on average a higher proportion of center-based programs with full time care (77%) in their community relative to white non-Hispanic households, although still lower than for black non-Hispanic households.

CENTER-BASED PROVIDERS CARING FOR CHILDREN BIRTH TO 3 YEARS OLD

In Exhibit 9, the cluster-aggregated characteristic is the proportion of centers serving at least one child under 3 years old. (Please also refer to its corresponding appendix Table A3).

The first panel in Exhibit 9 indicates that households with income above 300 percent of FPL have on average a higher percentage (66%) of center-based providers caring for children under three years old than do households in poverty (58%). Additional pairwise comparisons (not shown in appendix Table A3) indicate a statistically significant difference between households in the highest income bracket (66%) and households whose income bracket is characterized as either 100% to <200% FPL (58%) or 200% to <300% FPL (58%).

Households in low-poverty-density communities have higher proportions of centers with infant/toddler care (64%) than do households in moderate-poverty-density communities (55%).

In the third panel of Exhibit 9, urbanicity is also associated with community availability of center-based care for children under three years old. Families in high-density urban areas have on average significantly higher proportions of centers caring for children under 3 years old (63%) than families in moderately urban areas (45%). The average proportion of centers offering care for children under the age of 3 near households in rural areas (43%) differs from the proportion for households in high-density urban areas (63%).

With respect to race/ethnicity of households, black households have a higher proportion, on average, of centers in their communities (65%) serving children under 3 when compared to white non-Hispanic households (60%). All other comparisons of these metrics with white non-Hispanic households are statistically insignificant. A follow-up pairwise comparison (testing not shown in appendix Table A3) suggest that Hispanic families have a lower proportion (57%) of centers in their communities offering care for children under 3 years old than do black non-Hispanic households (65%).

On average, 60 percent of centers near households who use center-based ECE serve children birth to 3 years old. Households who do not use center-based care live near slightly higher (but

still statistically significant) percentages (63%) of centers offering services to children under the age of 3.

Exhibit 9. Average Proportion of Centers in Households' Provider Clusters that Care for Children 0-3 Years Old

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.583	0.014
100% to <200% poverty	0.585	0.020
200% to <300% poverty	0.583	0.025
>=300% poverty	0.658	0.018
Community poverty density in categories		
Low	0.639	0.022
Moderate	0.554	0.025
High	0.586	0.023
Urbanicity in categories		
High density urban	0.626	0.015
Moderate density urban	0.454	0.057
Rural	0.431	0.064
Race and Ethnicity		
White (non-Hispanic)	0.602	0.020
Black (non-Hispanic)	0.653	0.022
Hispanic	0.571	0.019
Other (non-Hispanic)	0.631	0.018
Presence of at least one child less than 36 months old		
At least one	0.617	0.017
None	0.603	0.016
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.617	0.016
Only adult(s) in the HHs is(are) the parent(s)	0.587	0.017
Use of center-based care for at least one child (0-5)		
For at least one child	0.596	0.016
Do not use this type of care	0.631	0.015

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

CENTERS WITH AT LEAST ONE CHILD FUNDED WITH CHILD CARE SUBSIDIES, HEAD START DOLLARS OR PUBLIC PRE-K SUPPORT

Exhibits 10, 11 and 12 document the local availability of center-based programs with at least one child funded with either child care subsidies, Head Start or Public Pre-K as related to household characteristics (the explanation to follow also makes references to appendix tables A4, A5 and A6).

Regarding household income, in Exhibit 10 (first panel), the availability of center-based programs funded by child care subsidies (CCS) does not show a clear relationship with income or community poverty density. The average percent of CCS-funded centers available to families in their clusters is between 55 percent and 57 percent. Public Pre-K funded centers' proportions also do not show relationships to household income or community poverty density. In contrast, Exhibit 11 shows that the geographic availability of Head Start-funded centers decreases as household income increases. The average proportion of centers with Head Start funds near households located in high community poverty density (36%) is higher than for households in low poverty density areas (21%).

Exhibits 10 through 12 suggest that urbanicity of households is differentially associated with having a center-based program that serves at least one child funded by Head Start or Public Pre-K, but not by child care subsidies. Exhibit 12 indicates that the average proportion of center-based providers funded by public Pre-K near households located in highly urban communities (36%) is higher than the average proportion for households located in rural communities (17%). Interestingly, Exhibit 11 suggests that the average proportion of centers receiving Head Start funds near households in high density urban communities (26%) is lower than for households in moderate density urban areas (42%).

One key feature revealed by Exhibits 10 through 12 relates to the geographical availability of publicly-funded centers among households of different races/ethnicities. The average proportions of centers near Hispanic households that receive either Pre-K (42%) or Head Start (33%) dollars are higher than the average proportions for white non-Hispanic households (33% and 25%, respectively). By contrast, the average proportion of centers funded by CCS is lower near Hispanic households (51%) than near white non-Hispanic households (57%).

Exhibit 10. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with CCS

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.550	0.017
100% to <200% poverty	0.551	0.023
200% to <300% poverty	0.565	0.028
>=300% poverty	0.574	0.026
Community poverty density in categories		
Low	0.574	0.027
Moderate	0.547	0.026
High	0.549	0.026
Urbanicity in categories		
High density urban	0.565	0.018
Moderate density urban	0.535	0.054
Rural	0.506	0.068
Race and Ethnicity		
White (non-Hispanic)	0.573	0.023
Black (non-Hispanic)	0.630	0.022
Hispanic	0.506	0.019
Other (non-Hispanic)	0.552	0.023
Presence of at least one child less than 36 months old		
At least one	0.575	0.020
None	0.556	0.017
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.567	0.019
Only adult(s) in the HHs is(are) the parent(s)	0.552	0.017
Use of center-based care for at least one child (0-5)		
For at least one child	0.549	0.018
Do not use this type of care	0.587	0.018

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

Exhibit 11. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with Head Start

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.335	0.017
100% to <200% poverty	0.295	0.023
200% to <300% poverty	0.264	0.024
>=300% poverty	0.211	0.021
Community poverty density in categories		
Low	0.210	0.023
Moderate	0.347	0.025
High	0.363	0.026
Urbanicity in categories		
High density urban	0.263	0.018
Moderate density urban	0.423	0.052
Rural	0.385	0.112
Race and Ethnicity		
White (non-Hispanic)	0.255	0.021
Black (non-Hispanic)	0.273	0.024
Hispanic	0.333	0.024
Other (non-Hispanic)	0.276	0.024
Presence of at least one child less than 36 months old		
At least one	0.280	0.019
None	0.275	0.017
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.265	0.018
Only adult(s) in the HHs is(are) the parent(s)	0.301	0.018
Use of center-based care for at least one child (0-5)		
For at least one child	0.287	0.017
Do not use this type of care	0.255	0.019

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

Exhibit 12. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with Public Pre-K

Household Characteristic	Descriptive Statistics	
	Mean	Standard Error
HH 2011 Income to poverty ratio in categories		
<100% poverty	0.373	0.018
100% to <200% poverty	0.342	0.018
200% to <300% poverty	0.364	0.024
>=300% poverty	0.331	0.024
Community poverty density in categories		
Low	0.351	0.024
Moderate	0.353	0.026
High	0.346	0.024
Urbanicity in categories		
High density urban	0.355	0.016
Moderate density urban	0.335	0.049
Rural	0.171	0.114
Race and Ethnicity		
White (non-Hispanic)	0.326	0.020
Black (non-Hispanic)	0.319	0.026
Hispanic	0.419	0.019
Other (non-Hispanic)	0.360	0.023
Presence of at least one child less than 36 months old		
At least one	0.355	0.018
None	0.348	0.016
Presence of at least one non-parent adult in the HH		
At least one non-parent adult in the HH	0.341	0.017
Only adult(s) in the HHs is(are) the parent(s)	0.371	0.017
Use of center-based care for at least one child (0-5)		
For at least one child	0.350	0.016
Do not use this type of care	0.352	0.019

Note: The table shows the mean value of the cluster-aggregate center-based provider measure for households with each indicated characteristic. Analyses include all households with one or two parents and at least one child under five years and having at least ECE center in the provider cluster.

Conclusions, Limitations and Potential Extensions

NSECE data can help characterize the supply and demand for early care and education in the U.S. This type of analysis can be conducted because the NSECE survey design connects suppliers (providers) and demanders (households) through geography, allowing multiple representations of local markets where ECE transactions are most likely to occur. This report provides both a methodological guide and basic examples of the type of supply and demand analysis that can be conducted using these data.

The results indicate that there are significant differences in households' geographic access to centers providing parent-paid care, infant/toddler care, full-time care, and care supported by different sources of public funding. The methodology allows us to estimate these differences separately, so that we can isolate specific subgroups of households lacking geographic access to specific types of centers. This type of information can inform policy directly in terms of identifying locations of need, and can also help clarify the role of geographic access when we observe differences in usage among subgroups of households.

While the provider cluster is a good "proxy" for a geographically-defined area where households demand ECE services, it is also an imperfect one. As the NSECE team has shown in other tabulations, 55 percent of ECE arrangements for children age 3 through 5 years are located within 3 miles of the child's home, but about 12 percent of these arrangements are 8 miles or more from the child's house.[6] The explanatory power of the cluster aggregate is somewhat limited by the fact that some ECE transactions could occur outside the boundaries of the provider cluster.

In addition, the proportion of centers near a household with a certain characteristic is necessarily based on the total number of centers near a household; as we noted, this may be one center or it could be more than fifty. These data offer a picture in terms of geographical access and describe the household choice set, but do not say what choices have occurred.

The approach of this report is a significant methodological advance for exploiting the unique design of the NSECE, but we note several possible extensions of the approach that would be informative. These include incorporation of: measures of home-based care within the provider cluster, expansion to center-based characteristics such as prices or percent of children supported by child care subsidies (that is, non-dichotomous variables), and slot-level measures of availability.

The samples of home-based providers in the NSECE are smaller than for center-based providers, leaving many clusters without any home-based providers. In addition, many individuals provide home-based ECE in the child's home rather than in the provider's home

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[6] Please see the appendix tables in the NSECE factsheet: National Survey of Early Care and Education Project Team (forthcoming). *Fact Sheet: How Far Do Children Travel for Early Care and Education?* OPRE Report #2016-10, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

(where the provider was sampled). Sample sizes and appropriate treatment of care location will need to be resolved to incorporate home-based care into the present approach.

Similarly, the tabulated data offer straightforward interpretations for households' geographical access on binary outcomes such as whether or not the center receives any child care subsidies. Although we may be interested in the percentage of children receiving subsidies in centers, the interpretation of averages of cluster aggregates of such percentages requires further development of statistical theory.

Notice that these analyses do not utilize the number of children that a provider reported they could service. This is because of difficulties interpreting the capacity data reported in the center-based provider data. Therefore, we leave for future work the question of how enrollment or availability might be included in this type of analysis. One option would be to combine the survey data with administrative data at the local level. This would be a relatively complex modeling task in which one would calculate a range of capacity for each provider from multiple sources of data, including licensing and actual utilization, in addition to what is available in the NSECE.

Other possible extensions would be more ambitious and may require additional data sources or not ultimately prove to be feasible. One of these would generate estimates with providers as the unit of observation (the present analyses use households as the unit of observation). The challenge here is that we can draw a cluster that is centered at each provider – a provider catchment area -- as we have done for each household, but we do not have NSECE data for every census tract that would fall in that catchment area. If instead we use the NSECE provider clusters (centered on households), then we are not fully capturing the potential set of households in whose choice set each provider falls.

Understanding the full set of relationships that characterize the demand and supply for early care and education programs using the NSECE data is a task that we have just begun with these analyses. Questions that could be answered using the NSECE data include, for instance, how do households differ in their geographical access to providers with heterogeneous prices? And, how does neighborhood inequality affect the supply and demand for ECE providers?

References

NSECE reports and briefs are available at:
http://www.acf.hhs.gov/programs/opre/research/project/national-survey-of-early-care-and-education-nsece-2010-2014.

National Survey of Early Care and Education Project Team (2015). *Which Early Care and Education Centers Participate in Head Start or Public Pre-Kindergarten?* OPRE Report #2015-92a, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

National Survey of Early Care and Education Project Team (2014). *Characteristics of Center-based Early Care and Education Programs: Initial Findings from the National Survey of Early Care and Education (NSECE)*. OPRE Report #2014-73a, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

National Survey of Early Care and Education Project Team (2013). *National Survey of Early Care and Education: Summary Data Collection and Sampling Methodology*. OPRE Report #2013-46, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

National Survey of Early Care and Education Project Team (forthcoming*). Fact Sheet: How Far Do Children Travel for Early Care and Education?* OPRE Report #2016-10, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

National Survey of Early Care and Education Project Team (2016). *NSECE PSU and Cluster Weights Users' Guide.*

Appendix I. Tests of Statistical Significance

Adding more rigor to the comparison of means that we present in contingency tables, we studied the individual (and joint) statistical significance of each category (categories) defined by the household variables in relation to center-based provider aggregates. In order to do that, we analyzed the statistical significance of regression coefficients in models where the center-based level attribute is the dependent variable and a set of indicator variables for each category of the household level attribute were used as independent variables. In general, we are interested in studying the degree of association between center-based cluster aggregates and household level attributes evaluating a regression model like the following:

1. $CB_{ic} = HH_{ic}\beta + \varepsilon_{ic}$

Where CB_{ic} makes reference to a specific center-based cluster aggregate attribute associated to household i located in SSU c (let's say, the CB attribute is the proportion of centers in a cluster that receive Head Start funding); HH_{ic} represents the household level characteristic of household i located in SSU c (let's say the attribute is household income to poverty ratio).

In this analysis, all household level attributes (HH_{ic}) have been categorically defined (in the categories presented above). For instance, the households' income to poverty ratios (a continuous variable) have been split in four mutually exclusive categories to identify families in either of four groups defined by income to poverty thresholds that were set at 100%, 100-200%; 200-300% and 300%+ of the Federal Poverty Line –FPL (notice that those are policy relevant thresholds). Each HH is characterized by its membership in a unique category defined by the underlying variable. In our example, each household will have four indicator variables associated to it, one indicator variable per each income to poverty ratio class membership that is evaluated.

Assuming that the number of categories that define the household level attribute is M, the degree of association between center-based cluster aggregates and household attributes is evaluated by operationalizing equation 1 to be of the form:

2. $CB_{ic} = 1[HH\_C1_{ic}]\beta_1 + 1[HH\_C2_{ic}]\beta_2 + \cdots + 1[HH\_CM_{ic}]\beta_M + \varepsilon_{ic}$,

where the $1[HH\_CM_{ic}]$ functions denote indicator variables (or dummy variables) that turns one if the household shares the attribute described by the category M and zero otherwise. In our example related to income to poverty ratio, each household will have four dummy variables associated to them (one per each income to poverty ratio evaluated). The analytical task is to evaluate the individual, joint and cross compared significance of those dummy variables after regressions that estimates the β_M coefficients from equation 2 have been conducted (by ordinary least squares –OLS). All analyses are conducted with reference to an excluded category, since an OLS model will be perfectly multicollinear if dummies are included for all categories.

We evaluate the following standard outcome from OLS regression analysis:

- Test for individual level significance of the predictive power of indicator variables constructed from categorical variables in the Household Survey explaining center-based cluster aggregates (t-tests—with reference to an omitted category).
- Across categories tests for differences in means. We employ F-tests to evaluate whether means across groups differ from each other. This allows assessing whether the groups tested (described by household level characteristics) differ in terms of their access to the center-based attribute in question, and which subgroups differ from the reference group. This is equivalent to using an ANOVA table.

Note that the household variables in these analyses either express order or classify mutually exclusive attributes of a construct. For instance the community poverty density increases as the categories associated to the variables increase in numbers (from 1 to 3), while the race/ethnicity variable classifies households on a mutually exclusive basis depending on their race attribute, but without reference to categorical order. Acknowledging those differences in the characteristics of the household categorical variables that we analyze are important to interpret our results.

Table A1. Average Proportion of Centers in Households' Provider Clusters that Charge Families for Care

Household Characteristic	Regression-based Statistics				
	β Coefficient	Standard Error	P-value (t statistics)	P-value (F- statistics)	R^2
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.000	0.047
100% to <200% poverty	0.043	0.017	0.012		
200% to <300% poverty	0.060	0.021	0.005		
>=300% poverty	0.142	0.019	0.000		
Community poverty density in categories					
Low	-	-	-	0.000	0.084
Moderate	-0.132	0.028	0.000		
High	-0.167	0.030	0.000		
Urbanicity in categories					
High density urban	-	-	-	0.071	0.012
Moderate density urban	-0.093	0.045	0.041		
Rural	-0.086	0.074	0.243		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.000	0.023
Black (non-Hispanic)	-0.004	0.022	0.845		
Hispanic	-0.103	0.025	0.000		
Other (non-Hispanic)	-0.017	0.019	0.375		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.398	0.000
None	-0.009	0.011	0.398		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.000	0.008
Only adult(s) in the HHs is(are) the parent(s)	-0.051	0.011	0.000		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.000	0.007
Do not use this type of care	0.047	0.011	0.000		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.

Table A2. Average Proportion of Centers in the Households' Provider Clusters that Care for Children Full Time

Household Characteristic	Regression-based Statistics				
	β Coefficient	Standard Error	P-value (t statistics)	P-value (F-statistics)	R²
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.034	0.007
100% to <200% poverty	-0.031	0.014	0.030		
200% to <300% poverty	-0.053	0.023	0.023		
>=300% poverty	-0.001	0.016	0.933		
Community poverty density in categories					
Low	-	-	-	0.027	0.015
Moderate	-0.028	0.035	0.416		
High	0.056	0.027	0.039		
Urbanicity in categories					
High density urban	-	-	-	0.050	0.018
Moderate density urban	-0.074	0.056	0.186		
Rural	-0.188	0.089	0.035		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.000	0.020
Black (non-Hispanic)	0.105	0.022	0.000		
Hispanic	0.047	0.021	0.025		
Other (non-Hispanic)	0.018	0.016	0.277		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.094	0.001
None	-0.016	0.009	0.094		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.126	0.001
Only adult(s) in the HHs is(are) the parent(s)	0.019	0.012	0.126		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.074	0.001
Do not use this type of care	0.020	0.011	0.074		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.

Table A3. Average Proportion of Centers in Households' Provider Clusters that Provide Care for Children in the 0-3 Years Old Age Range

Household Characteristic	Regression-based Statistics				
	β Coefficient	Standard error	P-value (t statistics)	P-value (F-statistics)	R²
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.000	0.018
100% to <200% poverty	0.002	0.016	0.914		
200% to <300% poverty	0.000	0.023	0.997		
>=300% poverty	0.075	0.018	0.000		
Community poverty density in categories					
Low	-	-	-	0.026	0.020
Moderate	-0.085	0.032	0.008		
High	-0.052	0.030	0.082		
Urbanicity in categories					
High density urban	-	-	-	0.000	0.044
Moderate density urban	-0.172	0.050	0.001		
Rural	-0.195	0.047	0.000		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.001	0.010
Black (non-Hispanic)	0.051	0.024	0.033		
Hispanic	-0.032	0.023	0.169		
Other (non-Hispanic)	0.029	0.019	0.128		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.189	0.001
None	-0.014	0.011	0.189		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.015	0.003
Only adult(s) in the HHs is(are) the parent(s)	-0.030	0.012	0.015		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.004	0.004
Do not use this type of care	0.035	0.012	0.004		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.

Table A4. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with CCS

HOUSEHOLD CHARACTERISTIC	Regression-based statistics				
	β Coefficient	Standard error	P-value (t statistics)	P-value (F-statistics)	R^2
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.767	0.001
100% to <200% poverty	0.000	0.020	0.986		
200% to <300% poverty	0.015	0.029	0.617		
>=300% poverty	0.024	0.027	0.380		
Community poverty density in categories					
Low	-	-	-	0.733	0.002
Moderate	-0.028	0.038	0.470		
High	-0.025	0.038	0.506		
Urbanicity in categories					
High density urban	-	-	-	0.585	0.001
Moderate density urban	-0.030	0.053	0.574		
Rural	-0.059	0.064	0.356		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.000	0.014
Black (non-Hispanic)	0.057	0.028	0.039		
Hispanic	-0.067	0.027	0.014		
Other (non-Hispanic)	-0.020	0.025	0.406		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.144	0.001
None	-0.019	0.013	0.144		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.319	0.001
Only adult(s) in the HHs is(are) the parent(s)	-0.015	0.015	0.319		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.011	0.004
Do not use this type of care	0.038	0.015	0.011		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.

Table A5. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with Head Start

Household Characteristic	Regression-based Statistics				
	β Coefficient	Standard Error	P-value (t statistics)	P-value (F-statistics)	R²
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.000	0.029
100% to <200% poverty	-0.040	0.019	0.034		
200% to <300% poverty	-0.071	0.023	0.003		
>=300% poverty	-0.124	0.023	0.000		
Community poverty density in categories					
Low	-	-	-	0.000	0.063
Moderate	0.137	0.034	0.000		
High	0.153	0.034	0.000		
Urbanicity in categories					
High density urban	-	-	-	0.005	0.023
Moderate density urban	0.160	0.052	0.002		
Rural	0.122	0.100	0.222		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.031	0.010
Black (non-Hispanic)	0.018	0.027	0.506		
Hispanic	0.078	0.027	0.004		
Other (non-Hispanic)	0.021	0.023	0.363		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.727	0.000
None	-0.004	0.012	0.727		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.008	0.004
Only adult(s) in the HHs is(are) the parent(s)	0.037	0.014	0.008		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.026	0.003
Do not use this type of care	-0.032	0.014	0.026		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.

Table A6. Average Proportion of Centers in Households' Provider Clusters with at Least One Child Funded with Public Pre-K

Household Characteristic	Regression-based Statistics				
	β Coefficient	Standard Error	P-value (t statistics)	P-value (F-statistics)	R^2
Income HH 2011 Income to poverty ratio in categories					
<100% poverty	-	-	-	0.200	0.003
100% to <200% poverty	-0.030	0.017	0.075		
200% to <300% poverty	-0.009	0.026	0.740		
>=300% poverty	-0.041	0.026	0.110		
Community poverty density in categories					
Low	-	-	-	0.980	0.000
Moderate	0.002	0.037	0.954		
High	-0.005	0.036	0.890		
Urbanicity in categories					
High density urban	-	-	-	0.133	0.006
Moderate density urban	-0.020	0.050	0.685		
Rural	-0.184	0.092	0.047		
Race and Ethnicity					
White (non-Hispanic)	-	-	-	0.001	0.014
Black (non-Hispanic)	-0.007	0.028	0.803		
Hispanic	0.093	0.026	0.000		
Other (non-Hispanic)	0.034	0.024	0.152		
Presence of at least one child less than 36 months old					
At least one	-	-	-	0.591	0.000
None	-0.007	0.013	0.591		
Presence of at least one non-parent adult in the HH					
At least one non-parent adult in the HH	-	-	-	0.042	0.002
Only adult(s) in the HHs is(are) the parent(s)	0.030	0.015	0.042		
Use of center-based care for at least one child (0-5)					
For at least one child	-	-	-	0.913	0.000
Do not use this type of care	0.002	0.017	0.913		

Note: Coefficients are from OLS regressions of the center-based cluster aggregate (dependent variable) on indicator variables for each household characteristic. All regressions are weighted using Household survey weights. Design-corrected standard errors are reported.